

WHAT IS CLAIMED IS:

Sub A1 1. ~~A method for performing resource translation,~~  
comprising:

obtaining a description of a machine;

5 determining from the description whether cycles output by  
a resource require translation from one bus to another bus,  
and if so, providing a translator for the resource; and  
~~configuring the resource based on the translator.~~

10 2. The method of claim 1 wherein obtaining a  
description of machine hardware includes reading firmware  
information.

15 3. The method of claim 1 wherein obtaining a  
description of machine hardware includes constructing a  
namespace.

4. The method of claim 3 wherein determining from the  
description includes analyzing the namespace.

20 5. The method of claim 4 wherein the machine is  
described in accordance with ACPI, and wherein determining  
from the description includes evaluating information in a  
current resources object.

6. The method of claim 1 wherein determining from the description includes looking for address translation information in the description.

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7. The method of claim 1 wherein providing a translator for the resource includes returning a table of functions.

8. The method of claim 1 wherein providing a translator  
10 for the resource includes performing a translation.

9. ~~The method of claim 1 wherein providing a translator~~  
for the resource includes returning type information.

10. The method of claim 1 wherein the type information  
15 corresponds to I/O.

11. The method of claim 1 wherein the type information  
~~corresponds to memory.~~

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12. The method of claim 1 further comprising locating the resource.

Sub 17/ 13. ~~The method of claim 1 wherein configuring the~~  
resource based on the translator includes telling the resource  
what cycles to issue to cause an appropriate I/O cycle on the  
other bus.

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14. The method of claim 13 further comprising starting  
the resource.

10 15. A system for configuring a resource to communicate  
with a device, comprising:

a bus bridge to which the device is connected,

15 a first component configured to analyze a description of  
the machine, and based on the description, to provide a  
translator for the resource based on translation that will be  
performed at the bus bridge; and

a second component configured to obtain the translator  
from the first component, and further configured to tell the  
resource to output cycles based on information in to the  
translator.

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16. The system of claim 15 wherein the bus bridge  
comprises a CPU to PCI bridge.

17. The system of claim 15 wherein the bus bridge comprises a PCI to ISA bridge.

18. The system of claim 15 wherein the first component  
5 comprises an ACPI driver.

19. The system of claim 15 wherein the other component comprises an operating system component.

10 20. The system of claim 19 wherein the other component comprises a Plug and Play component.

21. The system of claim 15 wherein the description of the machine is provided in firmware information.  
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22. The system of claim 21 wherein the first component constructs a namespace from the firmware information.

23. The system of claim 15 wherein the first component  
20 performs a translation.

24. The system of claim 15 wherein the first component provides the translator to change a memory address.

